

Fig. 1

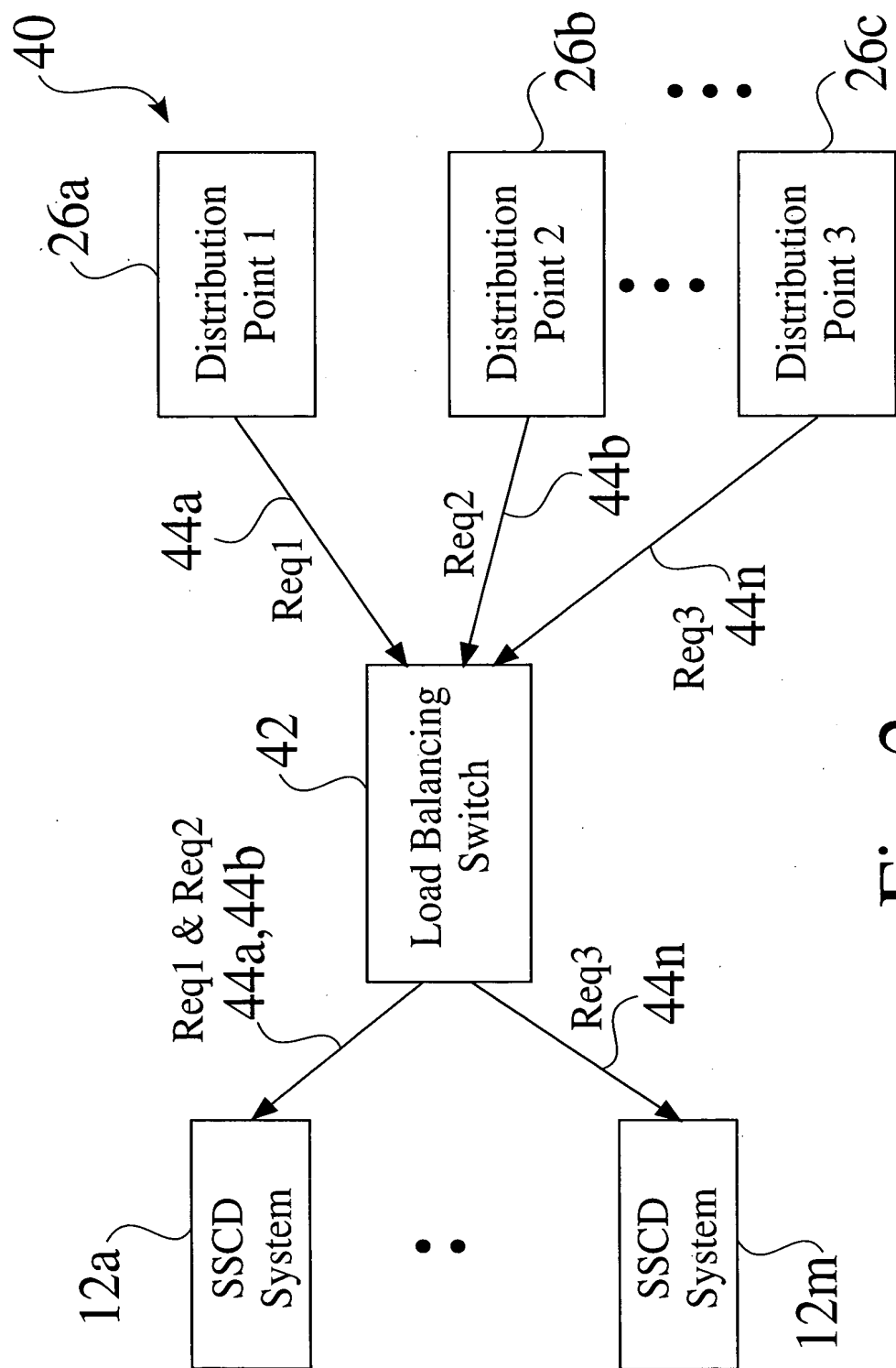


Fig. 2

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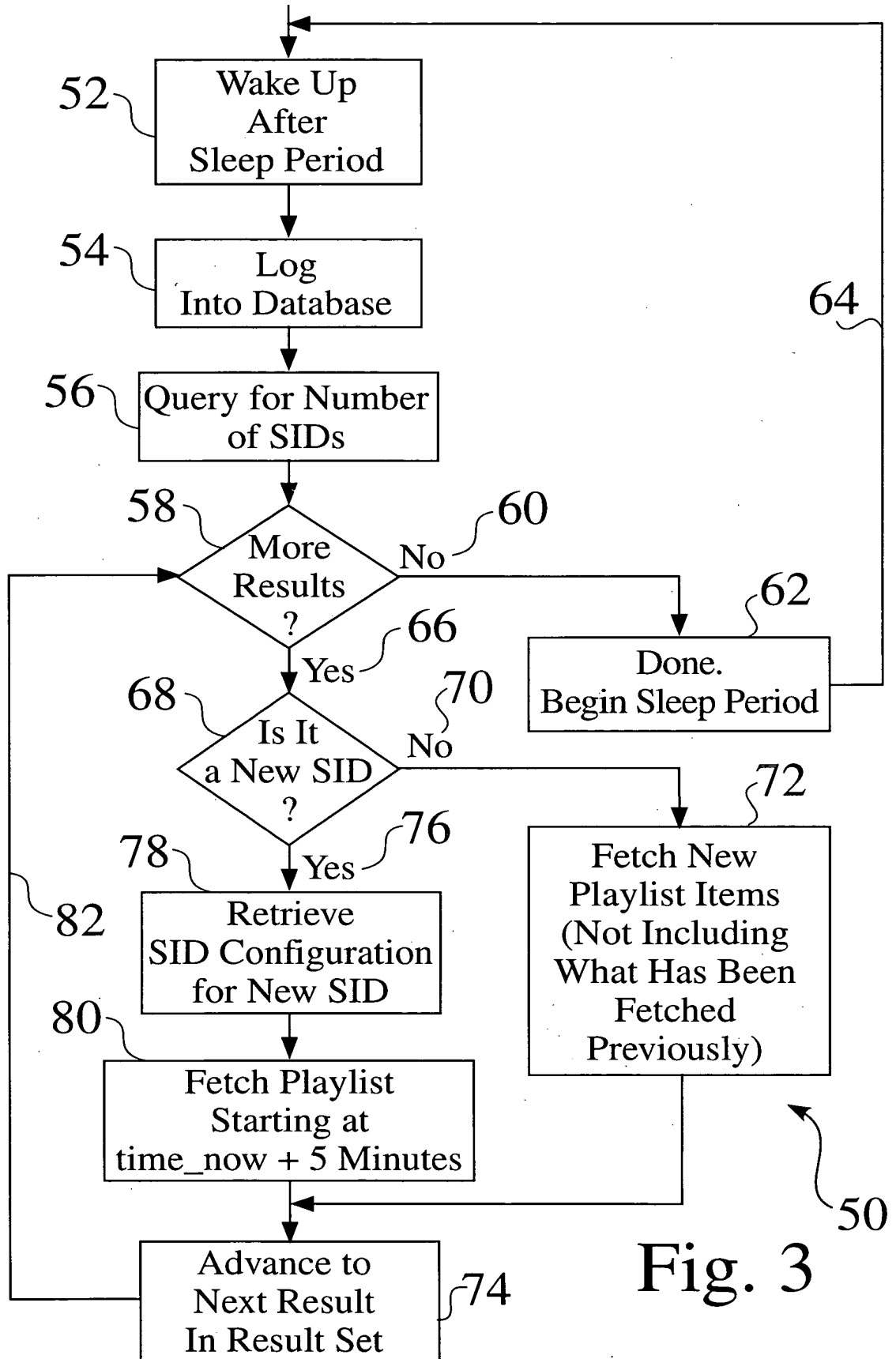


Fig. 3

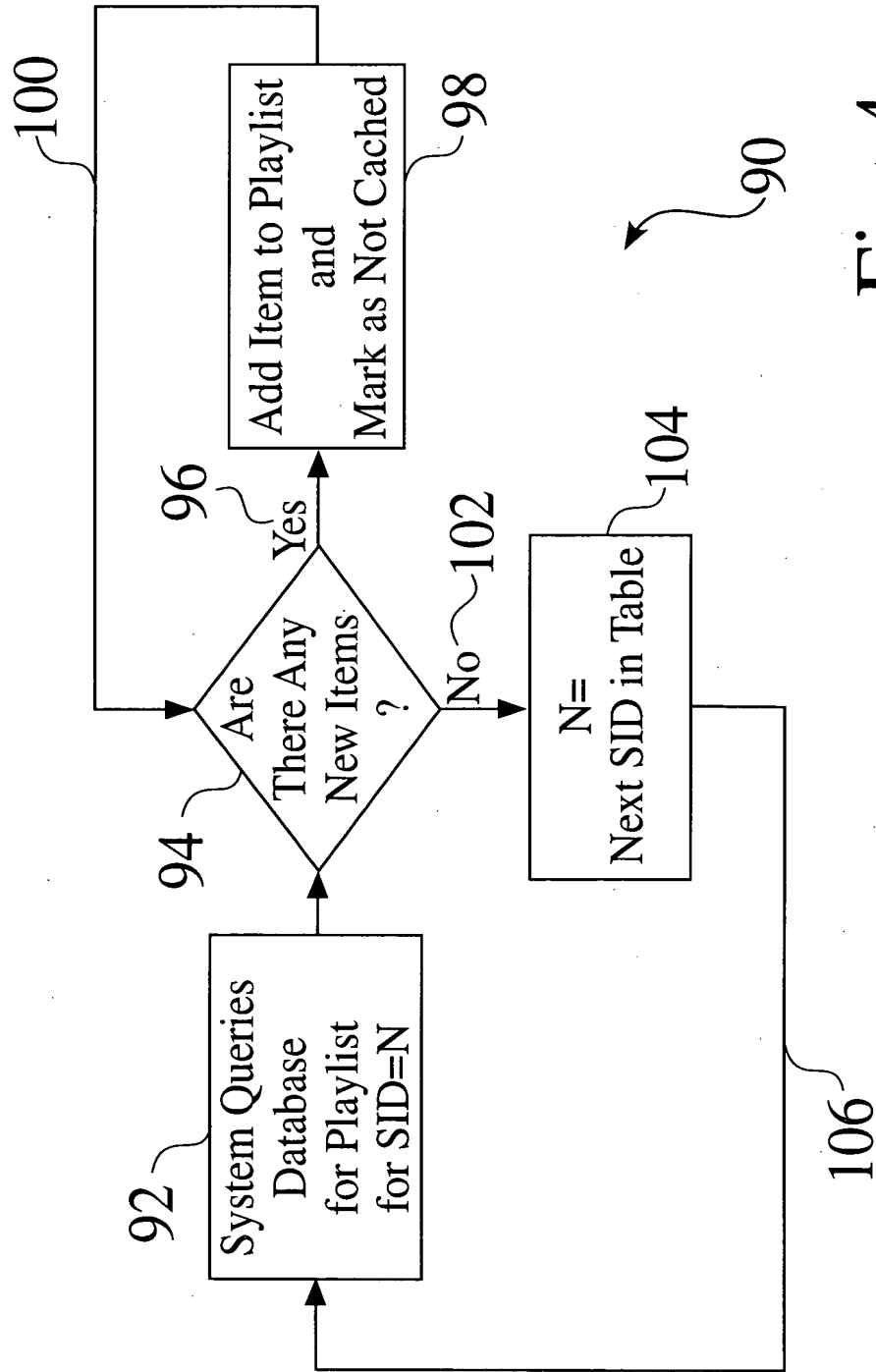


Fig. 4

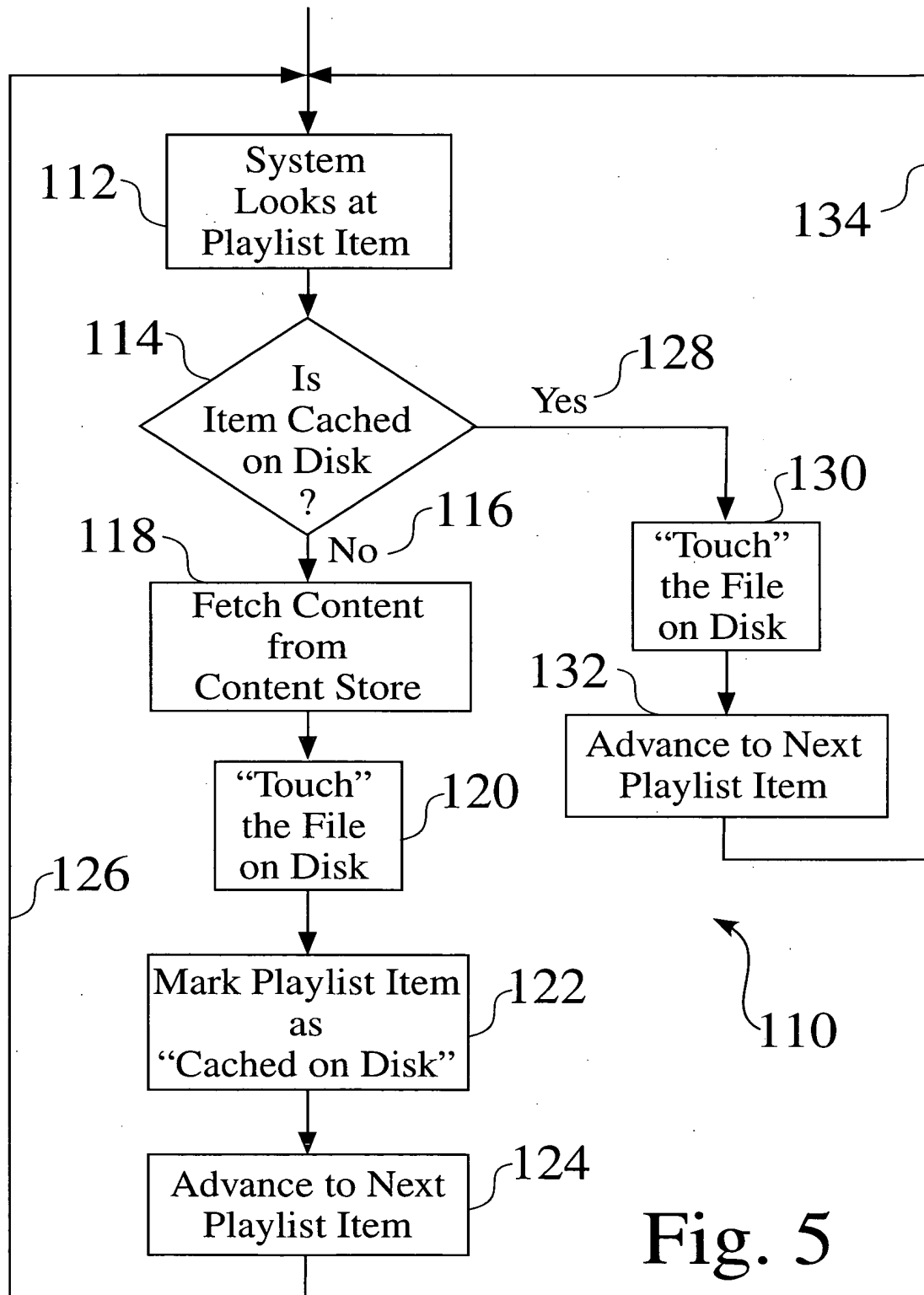


Fig. 5

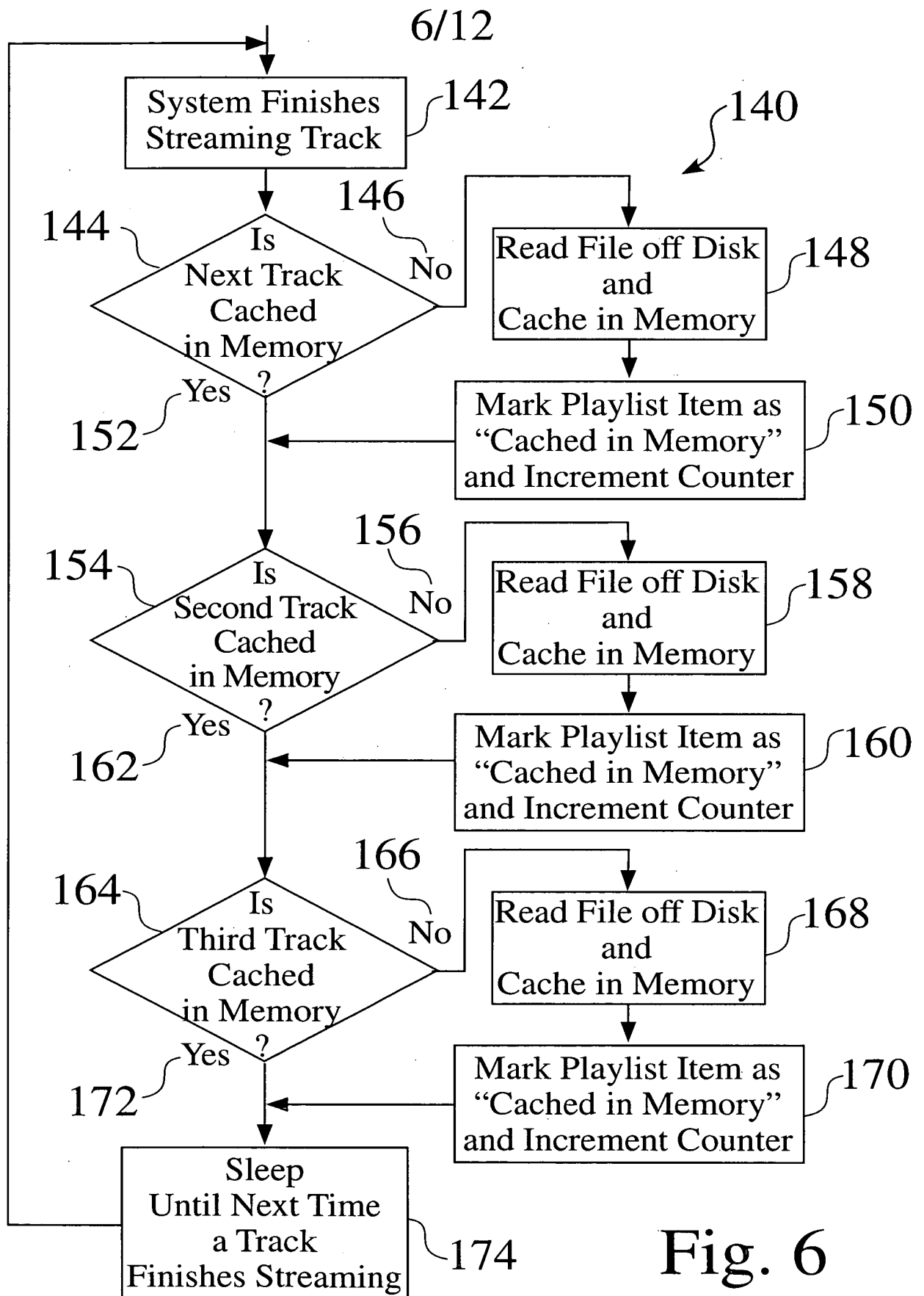


Fig. 6

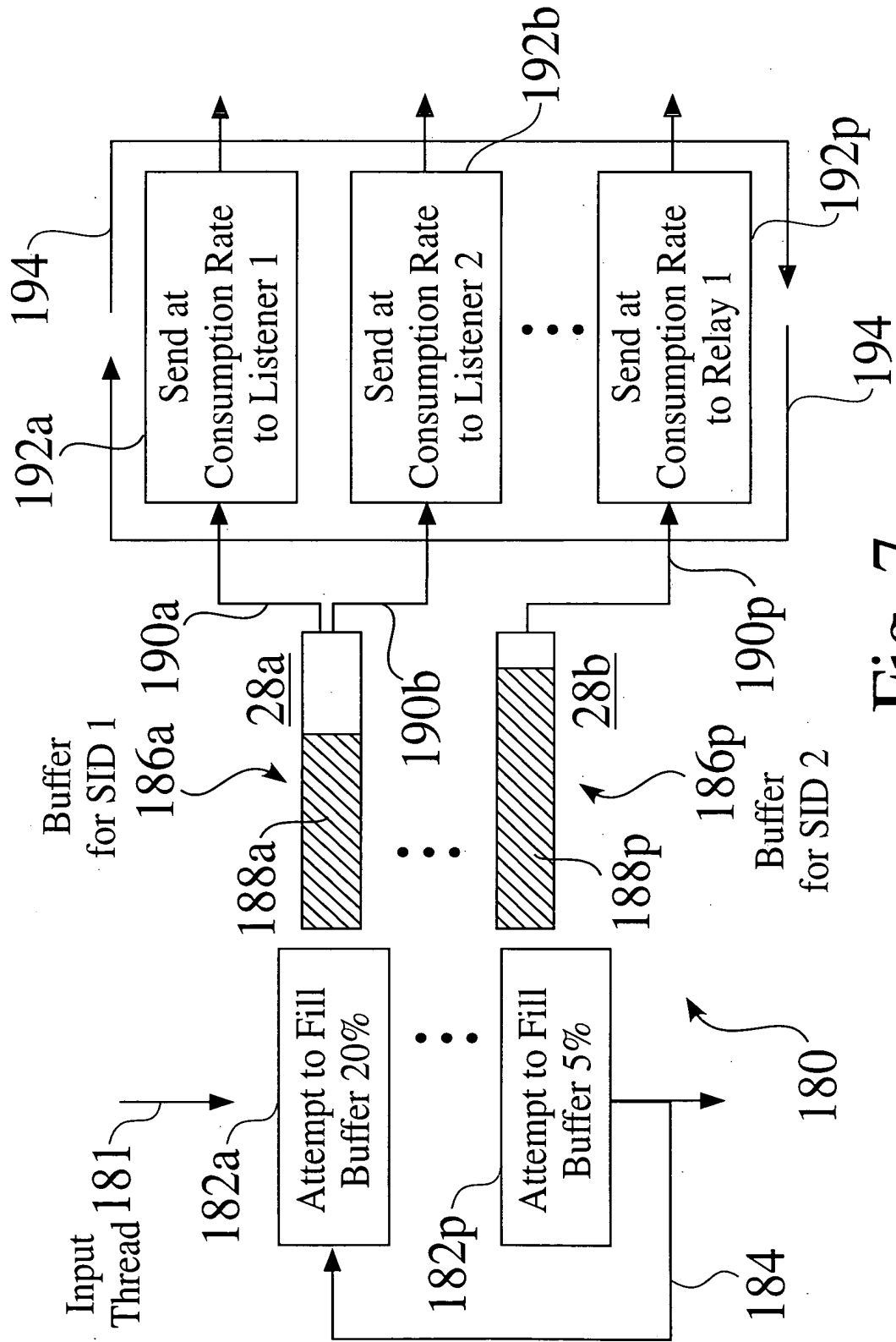


Fig. 7

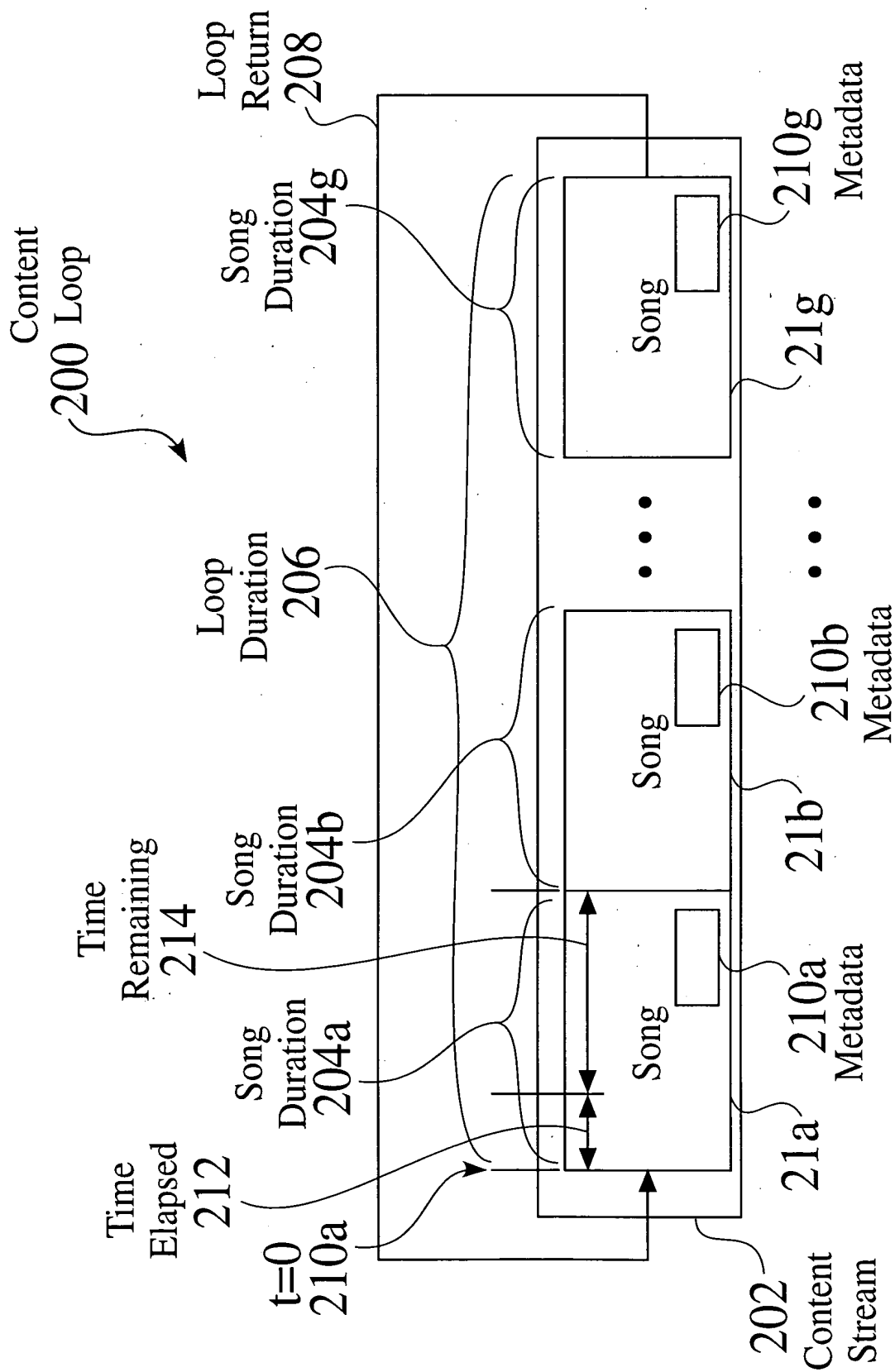


Fig. 8

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Logging			
Level	Module	Description	Action
Info	Cache	Cache Thread Started	
Error	Cache	Error opening <filename> for writing on localdisk	
Error	Cache	Content Store too busy sleeping for 10 seconds	
Error	Cache	6 errors getting file <filename>	
Error	Cache	Error Contacting Content Site (<host>:<port>), trying again in 30 Seconds	
Error	Client	Invalid SID requested	
Error	Client	Service full, disconnecting	
Info	Client	Starting stream (UID: <uid>)[L: <lid>] { A: <user_agent> }(SID: <sid>)	
Info	Client	Connection closed (N seconds) (UID: <uid>)[L: <lid>] { Bytes: <bytes sent> }	
Info	Client	Invalid resource request(<URLPATH>)	
Info	Client	REQ: <url> <user-agent of client>	
Info	Kick	IP:Port kicked	
Error	Main	failed to alloc (N) bytes for stream placeholder; (no memory for the station configuration)	

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Fig. 9

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Logging			
Level	Module	Description	Action
Info	Main	SSCD System SERV_OSNAME SERV_VER DATE) starting; startup info	
Info	Main	Pid: <pid>	
Info	Main	loaded config from <config filename>	
Info	Main	initializing (usermax portbase)	
Error	Main	GMTOffset not set in config file	
Info	Main	Listener Max Connect of (%d) Minutes, set	
Error	Main	failed to alloc (%d) bytes for clients	
Error	Main	failed to alloc (%d) bytes for admin html page; this error is unlikely	
Error	Main	error initializing winsock	
Info	Main	opening client socket	
Error	Main	error opening client socket - Fatal Error	
Info	Main	database thread starting...started	
Info	Main	cache thread starting....started	
Info	Main	Timer thread starting....started	
Info	Main	Playlist thread starting....started	
Info	Main	Source thread starting....started	
Info	Main	Client main thread starting....started	
Info	Main	Client stream thread <threadId> starting....started	

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Fig. 10

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Logging			
Level	Module	Description	Action
Error	DB	ERROR: Contacting Database. Waiting 30 seconds to try again	
Info	DB	Connected to database: as user: with broadcaster id: and flavor id:	
Error	DB	ERROR: Getting Stream List from Database. Reconnect in 30 seconds\n“);	
Error	DB	ERROR: Populating initial playlists	
Error	DB	Could not find tracks for SID: <sid>	
Error	DB	ERROR: Adding more tracks	
Info	Playlist	read <playlist index> of <total entries available>	
Info	Signal	SIGHUP; Flushing Log Files	
Info	Signal	SIGTERM; exiting	
Info	Signal	SIGINT; exiting	
Info	Signal	SIGKILL; exiting	
Info	Signal	SIGHUP handled. lost terminal	
Info	Signal	SIGWINCH; Reloaded Config File	
Error	Source	Sid:<sid> Looping	

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Fig. 11

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Relevant Database Schema

```
CREATE TABLE STREAM (
    STREAM_ID          NUMBER(9) NOT NULL,
    CHANNEL_ID         NUMBER(9) NOT NULL,
    STREAM_CLASS        NUMBER(6) NOT NULL,
    STREAM_TYPE         NUMBER(6) NOT NULL,
    STREAM_UID          VARCHAR2(64) NOT NULL,
    AUTHBLOB            VARCHAR2(128),
    BITRATE             NUMBER(9) NOT NULL,
    META_CLASS          NUMBER(6),
    META_TYPE           NUMBER(6),
    RAW_STREAM          NUMBER(1),
    RAW_BITRATE         NUMBER(9),
    UV_URL              VARCHAR2(256)
    CONSTRAINT PK_STREAM
    PRIMARY KEY (STREAM_ID) )
```

```
CREATE TABLE BROADCAST_STREAM (
    STREAM_ID          NUMBER(9) NOT NULL,
    BROADCASTER_ID     NUMBER(9) NOT NULL,
    STATUS_ID           NUMBER(6),
    CONSTRAINT PK_BROADCAST_STREAM
    PRIMARY KEY (STREAM_ID, BROADCASTER_ID) )
```

```
CREATE TABLE BROADCAST (
    BROADCASTER_ID     NUMBER(6) NOT NULL,
    BROADCASTER_DNS    VARCHAR2(40),
    CONSTRAINT PK_BROADCAST
    PRIMARY KEY (BROADCASTER_ID) )
```

```
CREATE TABLE STATUS(
    STATUS_ID           NUMBER(6) NOT NULL,
    STATUS_DESC         VARCHAR2(60) NOT NULL,
    CONSTRAINT PK_STATUS
    PRIMARY KEY (STATUS_ID) )
```

```
CREATE TABLE SONG_LOCATION (
    SONG_ID             NUMBER(9) NOT NULL,
    STREAM_ID           NUMBER(9) NOT NULL,
    AUDIO_LOCATION      VARCHAR2(60) NOT NULL,
    CONSTRAINT PK_SONG_LOCATION
    PRIMARY KEY (SONG_ID, STREAM_ID) )
```

```
CREATE TABLE BLADES(
    BLADE_ID            NUMBER(6) NOT NULL,
    BLADE_DNS           VARCHAR2(40) NOT NULL,
    PRIMARY KEY (BLADE_ID) )
alter table song_play add ( metadata varchar2(2000) )
```

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Fig. 12